A Phased Implementation of PHINMS in a Small Automated Surveillance Application

Bill Lober, MD
Jim Sibley
Jun Zhang
University of Washington
lober@washington.edu

Not Rocket Science

Introduction

- PHINMS
  - Standards-based
  - Interoperable, extensible
  - Authenticated, secure
  - Platform independent, loosely coupled

  - Standard approach

Barriers to Adoption

- IT resources thin
  - No clear evidence that it's easy
- Existing systems
  - May displace existing solutions
- Familiarity
  - Examples… the more the better

Problem Statement/Opportunity

- Automated transmission of poison center data for environmental health reporting
- Poison Center uses standard call center software (TOXICALLR, Computer Automation Systems)
- WA DOH interested in automated reporting of pesticide exposures

Present State

- Manual selection of cases
- Faxing of printouts

Available Technology

- Commercial secure file transmission
- a.k.a. “sft”
- Proprietary http over ssl
  - Secure Transport, Tumbleweed Communications, http://www.valicert.com/
  - sftp supported, but not with present version
  - “sftserver - SecureTransport 3.5.7 build 8”

Goals

- Get data to DOH
- Use existing (sft) system
- Don’t waste time

and…

- See how PHINMS works
- Disseminate our experience

“Study Design”

- Observational study
- Compare parallel implementations using secure file transfer and PHINMS
- Evaluate time to implementation
- Note barriers

Methods

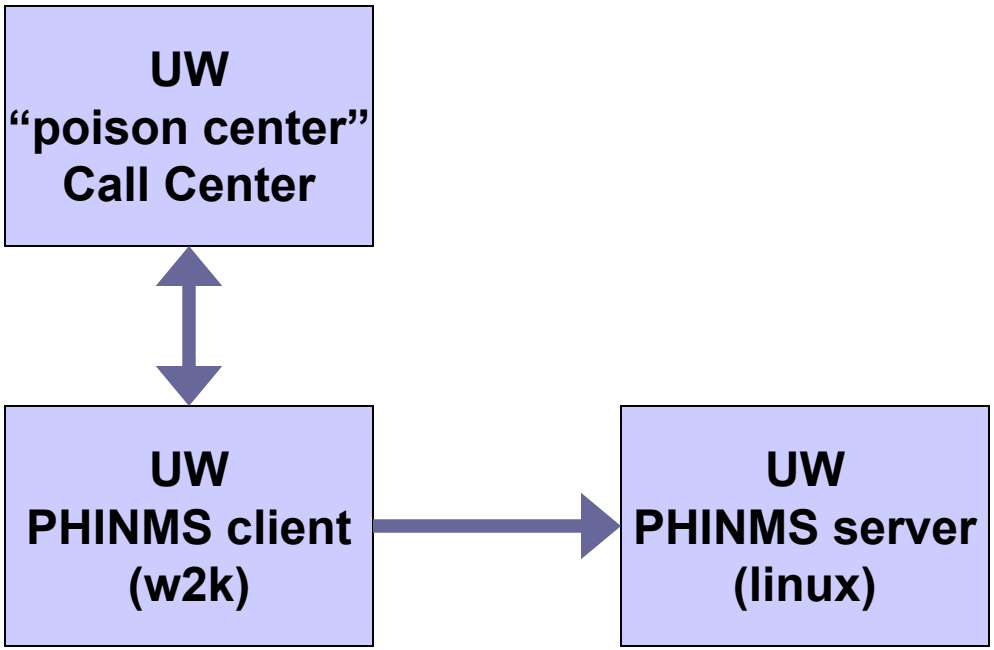
- Automate poison center data extract
- Use commercial file transfer method
- Parallel implementation of PHINMS
- Observe time and difficulty
- Compare
- Disseminate!

Materials

- Access to commercial secure file transfer
  - https based system
  - future extension to sftp
- PHINMS reference client and server
  - Version 2.1
  - Java applications
  - Windows, Linux, Unix

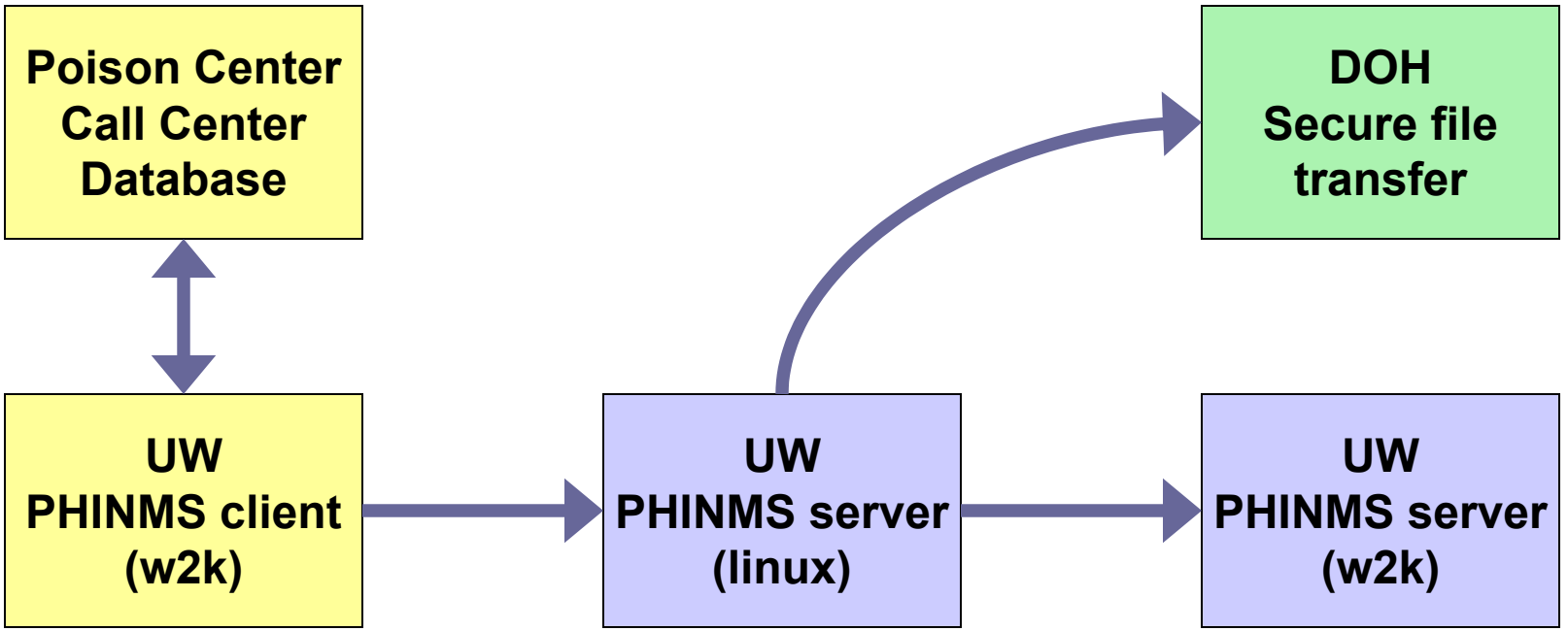
Architecture

- 3 phase approach
  - Phase 0: minimum impact development



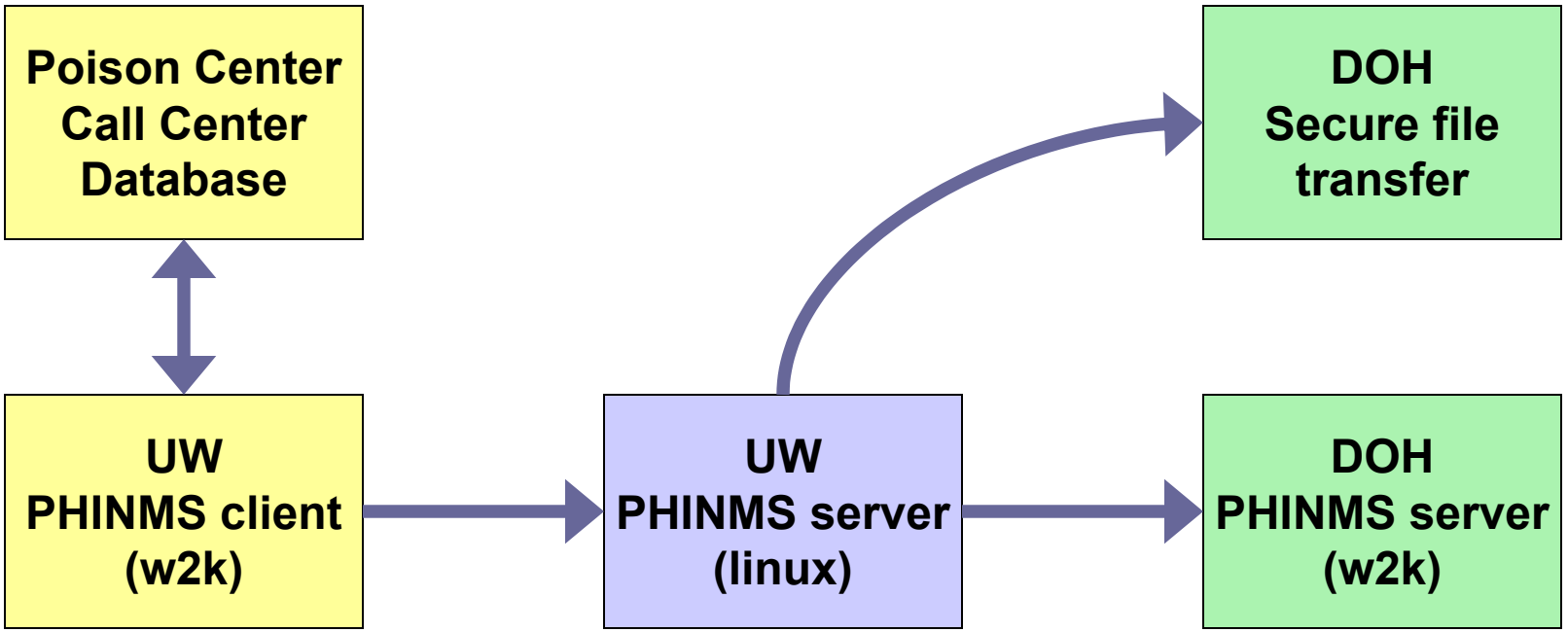
Architecture

- 3 phase approach
  - Phase 1: data collection & sft deployments



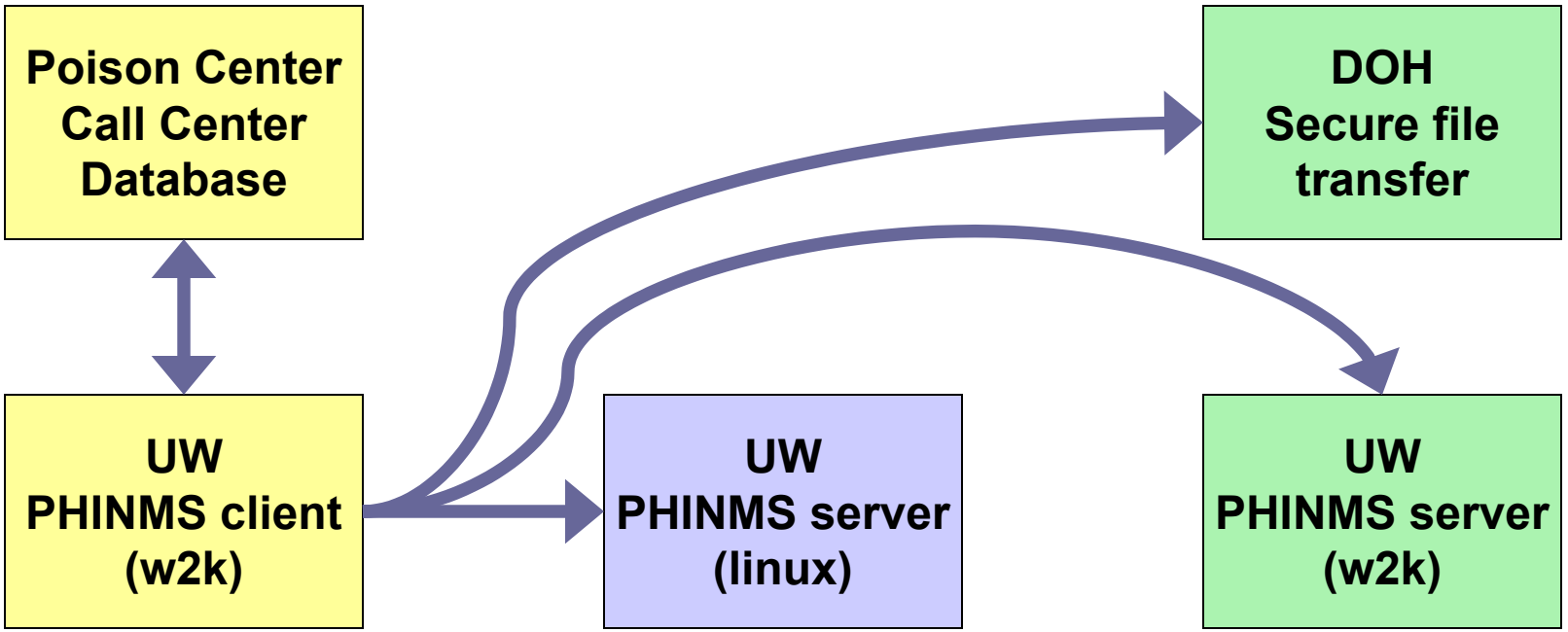
Architecture

- 3 phase approach
  - Phase 2: PHINMS – middleman



Architecture

- 3 phase approach
  - Phase 3 PHINMS – direct reporting



Results

- sft implementation
- PHINMS implementation

sft

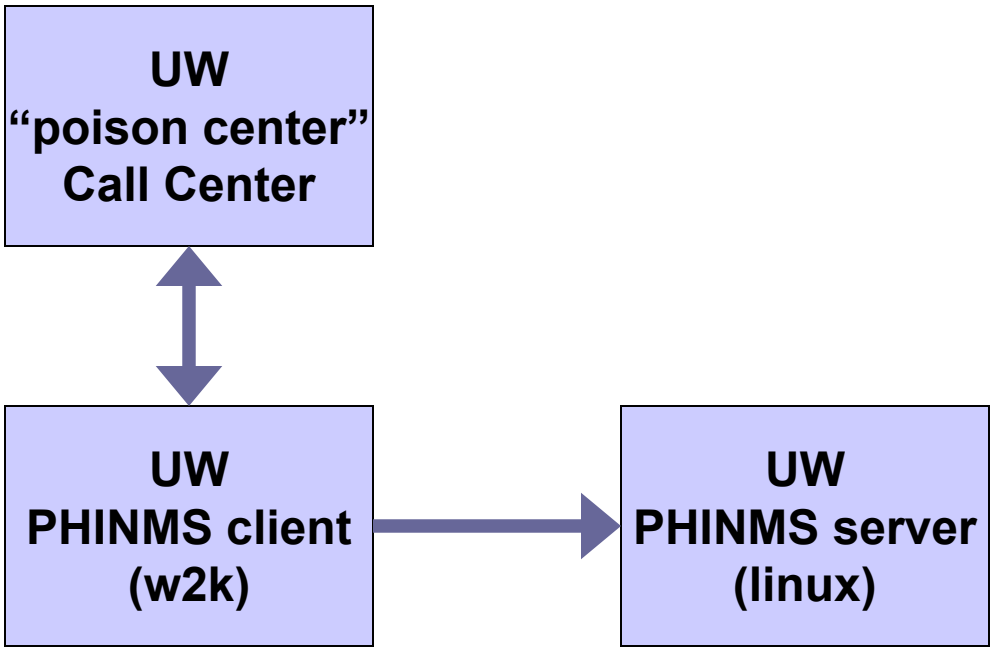
- Requirements
  - authorization
    - URL
    - Username/password
  - Valicert client software

PHINMS

- Requirements
  - Collaboration Protocol Agreement
  - URI
  - Authentication
    - U/P
    - (X.503 Certificates)

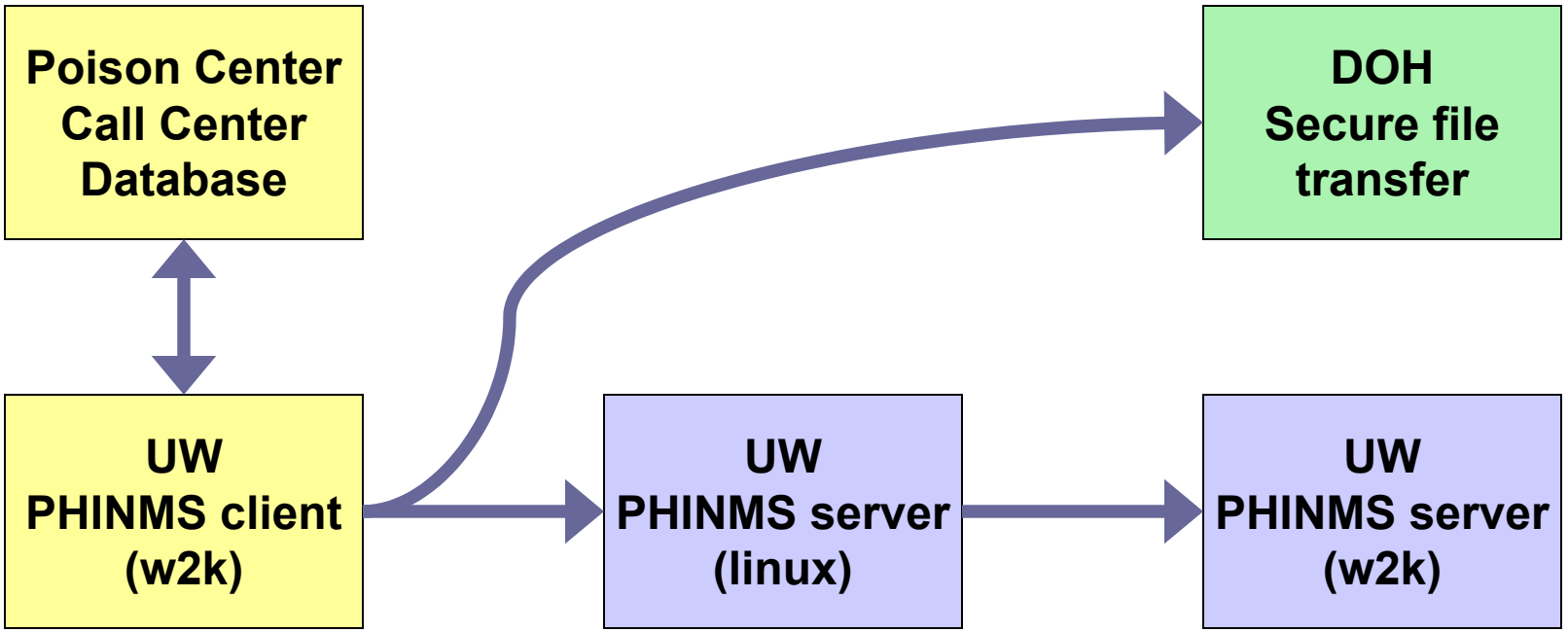
Results

- 3 phase approach
  - Phase 0: Minimum Impact Development



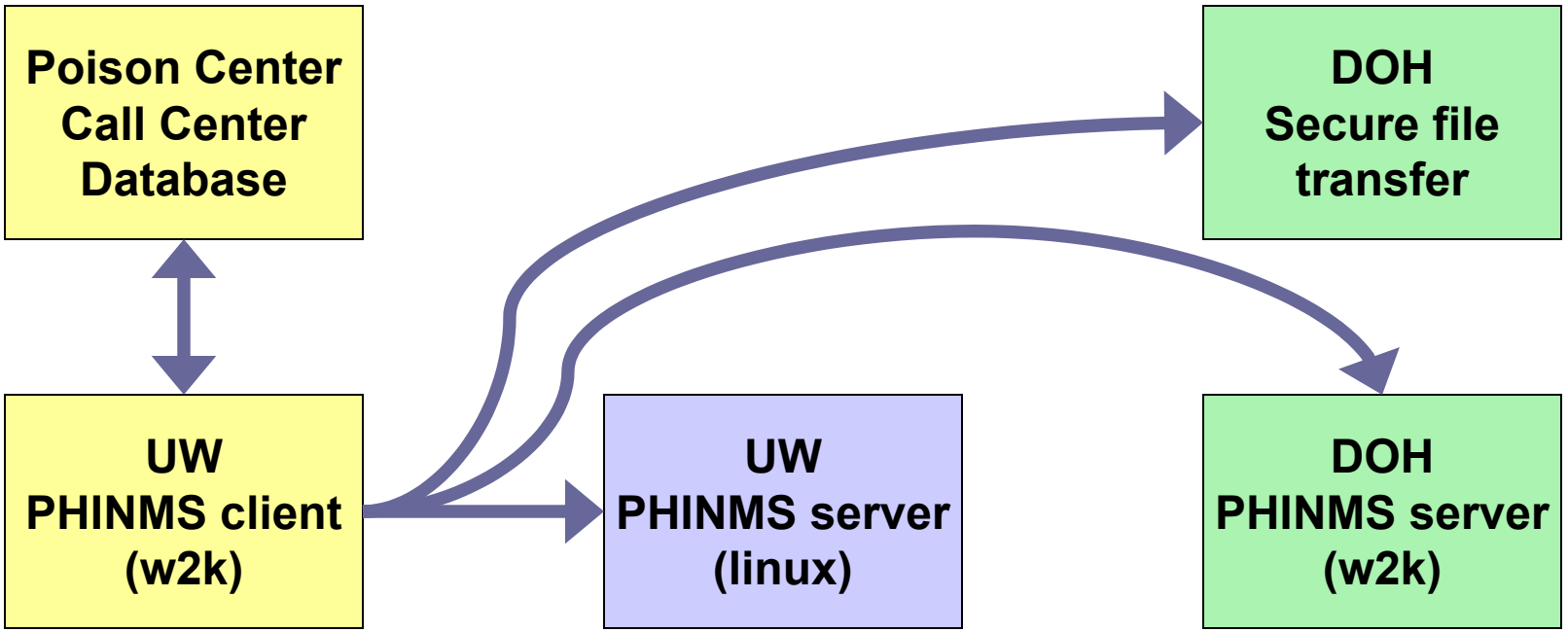
Results

- 3 phase approach
  - Phase 1: Data collection & sft deployments



Results (soon)

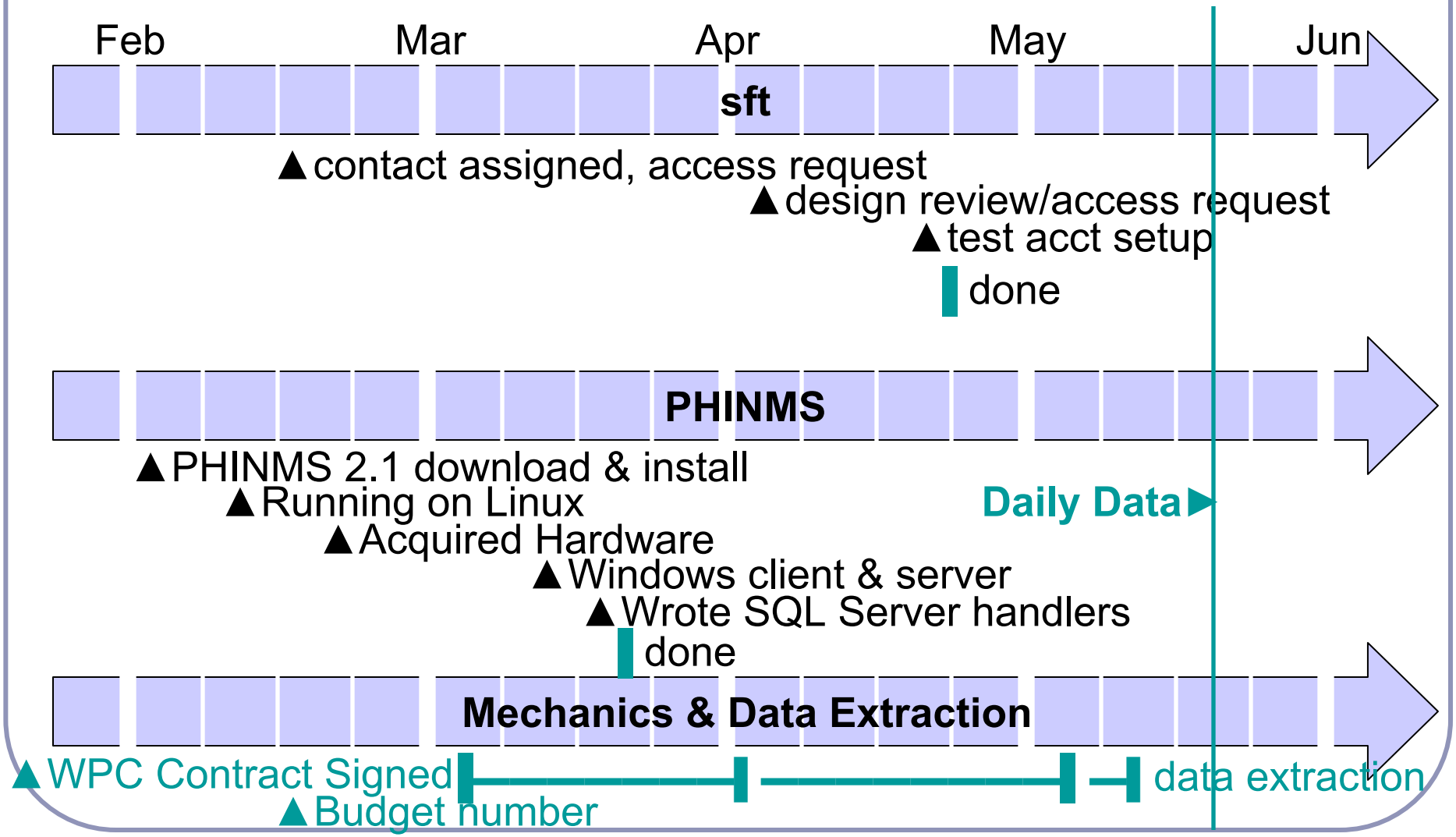
- ~~3~~ 2 phase approach
  - Phase 2: PHINMS – ~~middleman~~ direct



Project Timeline

- Initial
  - Nov 3, 03 – agreed on contracting mechanism
  - Dec 15, 03 – WPC signs/submits Research Agreement to fund work at UW
  - Dec 30, 03 – Amended SOW per DOH
  - Jan 14, 04 – UW department paperwork done
  - Feb 17, 04 – UW signs research agreement
- CDC
  - Jan 20, 04 – emailed Barry Rhodes
  - Jan 22, 04 – conf call with Barry, Tom Russell
  - Feb 2, 04 – downloaded software and began…

Results - Timelines



Conclusion

- PHINMS is feasible.

Thanks to

- Washington Poison Center
  - Steve Bobbink, Executive Director
- Washington State Department of Health, Environmental Public Health Tracking Network
  - Steve MacDonald, PI
  - Jim Van Derslice
  - Marnie Boardman
  - Bret Holtz
  - Michael Davisson, WEDSS/EDI

Questions?

- Now…
- lober@washington.edu